REMARKS

This is in response to the Office Action mailed on May 25, 2006, in which claims 1, 2, 4, 6, 7, 14-16, and 22-25 were rejected under 35 U.S.C. § 102(e) as being anticipated by Applicant Admitted Prior Art (AAPA). With this Amendment, claims 1, 16, and 22 are amended. In addition, it is submitted that claims 3, 5, 8-13, 17-21, and 26 should be considered and allowed, since they depend from allowable generic independent claims. Claims 1-26 are pending in the present application.

Claims 1, 2, 4, 6, 7, 14-16, and 22-25 were rejected under 35 U.S.C. § 102(e) as being anticipated by Applicant Admitted Prior Art (AAPA). In order to reject a claim under § 102(e), the reference must teach each and every limitation of the claims. MPEP 2131; *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987). With this Amendment, claims 1 and 16 are amended. Amended claim 1 recites a magnetoresistive sensor comprising a tri-layer reader stack including a first ferromagnetic layer, a second ferromagnetic layer, and a magnetoresistive layer positioned therebetween, and biasing means positioned with respect to the tri-layer reader stack and proximate to a medium confronting surface of the magnetoresistive sensor for biasing a magnetization of the first ferromagnetic layer substantially orthogonal to a magnetization of the second ferromagnetic layer. Amended claim 16 recites a magnetoresistive sensor comprising a first ferromagnetic free layer, a second ferromagnetic free layer, a magnetoresistive layer located between the first and second ferromagnetic free layers, and at least one biasing structure positioned with respect to the first and second ferromagnetic free layers and proximate to a medium confronting surface of the magnetoresistive sensor to bias a magnetization of the first ferromagnetic free layer substantially orthogonal to a magnetization of the second ferromagnetic free layer. By positioning a biasing means proximate to a medium confronting surface of the tri-layer reader stack, both the front edge and the back edge of free layers 12 and 16 are subject to the biasing field produced by the biasing means. This allows for greater control over the magnetic domains throughout free layers 12 and 16, thereby offering more control over the magnetic alignment between the two free layers and hysteresis-free magnetization reversal of the free layers. Page 15, lines 24-28.

The tri-layer reader stacks shown in FIGS. 3a and 3b are biased conventionally using a permanent magnet 22 to provide the stabilizing biasing field. Because permanent magnet 22 is adjacent only the back edge of tri-layer reader stack 10 (distal from the air bearing surface of the reader stack), magnetic domains at the medium confronting edge of free layers 12 and 16 may not be biased. The direction that the magnetization takes within a domain in the absence of an external magnetic field is represented by the easy axes of the domains of the material. Accordingly, while the magnetization directions within the domains near the back edge of free layers 12 and 16 remain under strong control due to the magnetic field produced by permanent magnet 22, the magnetization directions within the domains near the front (i.e., at the medium confronting surface) and side edges of free layers 12 and 16 are only loosely controlled by the magnetic field produced by permanent magnet 22. Thus, the magnetization directions within the domains near the medium confronting surface and side edges of free layers 12 and 16 are partially influenced by the shape anisotropy of the layers. In short, FIGS. 3a and 3b do not show a biasing means *proximate to a medium confronting surface of the tri-layer reader stack* for biasing a magnetization of the first ferromagnetic layer substantially orthogonal to a magnetization of the second ferromagnetic layer. Therefore, the recited elements of claims 1 and 16 are not disclosed by AAPA, and the rejection of claims 1 and 16 under 35 U.S.C. § 102(e) should be withdrawn.

Claims 2, 4, 6, 7, 14, 15, and 22-25 were also rejected under 35 U.S.C. § 102(e) as being anticipated by AAPA. Claims 2, 4, 6, 7, 14, and 15 depend from claim 1, and claims 22-25 depend from claim 16. As discussed above, claims 1 and 16 are not anticipated or otherwise taught by AAPA. Therefore, claims 2, 4, 6, 7, 14, 15, and 22-25 also are not anticipated or otherwise taught by AAPA.

Claims 3, 5, 8-13, 17-21, and 26 were previously withdrawn from consideration as being drawn to a non-elected species. Claims 3, 5, and 8-13 depend from allowable independent claim 1, and claims 17-21 and 26 depend from allowable independent claim 16. Thus, claim 3, 5, 8-13, 17-21, and 26 should also be considered and allowed, since they depend from allowable generic independent claims. See MPEP 809.02 and 37 C.F.R. 1.146.

CONCLUSION

In view of the foregoing, it is believed that all claims in the present application are in condition for allowance. Reconsideration and allowance of claims 1-26 are respectfully requested.

Respectfully submitted,

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